When predators become prey: the lizard-eating spiders of suburbia

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Introduction

Most vertebrates are larger than most invertebrates, and animals such as lizards feed extensively on animals such as spiders. Occasionally, however, the trophic relationship is reversed: many arthropods grow large enough to feed on amphibians, reptiles, birds and mammals (McKeown and Roberts 1963; McCormick and Polis 1982). Clearly, small-bodied species of vertebrates are at most risk. For example, the suburbs of Sydney are home to abundant, small scincid lizards (garden skinks *Lampropholis delicata* and *L. guichenoti*) that rarely exceed three gm in adult body mass; and also house many spiders that are more than capable of subduing a prey item of this size. In this Note, we report two cases of predation by spiders on adult lizards in the Sydney suburbs.

Observations

The first case occurred on 29 November 2011, when one of us (BT) noticed an adult *L. delicata* captured in the web of a redback spider *Latrodectus hasselti* beneath a plastic chair on the back patio of a house in Minto Heights (southwest Sydney). Over a two-hour period, the spider wrapped the lizard in silk (Fig. 1).

The second case occurred on an overcast day (18 November 2015), when a family member alerted one of us (RS) to a large huntsman spider (Family Sparassidae, genus *Heteropoda*; probably *H. longipes*) active at 14 05 h on the edge of a concrete driveway in Hunters Hill (inner western Sydney). The spider had moved from a grassy area to climb partway up a large plastic garbage bin when it was photographed. It was holding an adult *Lampropholis delicata* in its jaws (Fig. 2).

Discussion

Both cases were in residential areas, involved adult *L. delicata*, and apparently were fatal for the skink involved (based on a lack of struggling). Garden skinks are active foragers that spend much of their time moving about searching for food (Torr and Shine 1994). Redback spiders build scaffold webs with sticky threads that attach to the substrate. When they touch these threads, potential prey become entangled and the thread recoils upwards delivering the prey to the spider in waiting above. In the case of the redback spider's victim, then, the lizard was undoubtedly captured as it moved about (rather than being seized while it was sheltering). This is likely the case for the other incident also, because although they sometimes search actively for prey, sparassid spiders primarily are ambush predators (e.g. Henschel 1994).

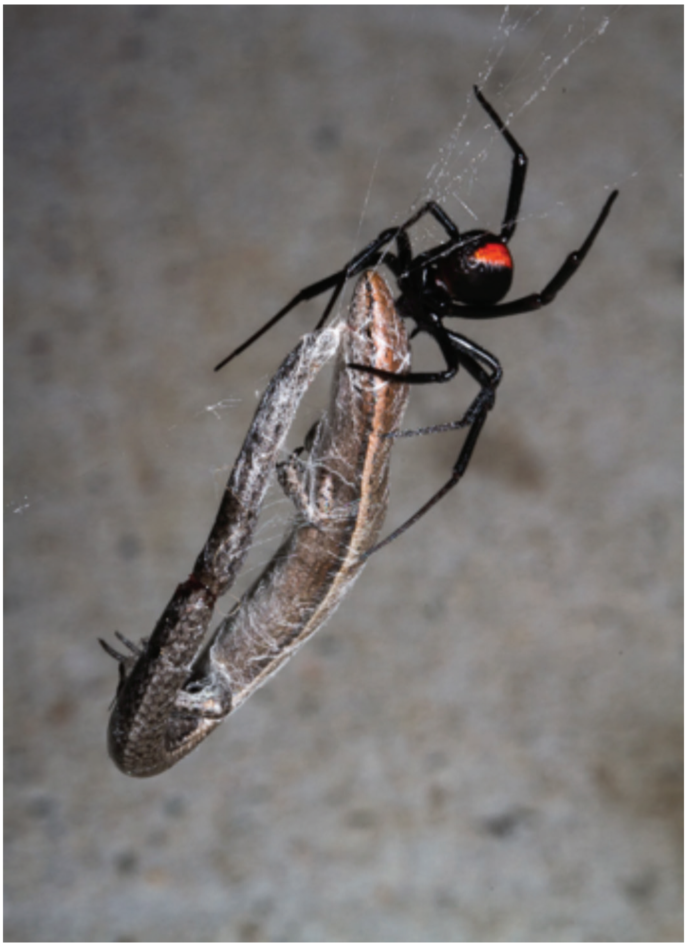

Figure 1. An adult Garden Skink *Lampropholis delicata* captured by a redback spider *Latrodectus hasselti* in a suburban backyard in Sydney. Photo B. Tamayo.

Given the high population densities of small lizards in urban Sydney (Torr and Shine 1994), where they co-occur with many taxa of large spiders (McKeown and Roberts 1963; Yen 1995), such interactions undoubtedly are commonplace. Metcalfe and Ridgeway (2013) describe a similar case of a redback spider with a garden skink (*L. delicata*) in its web, in bushland near Sydney, and cite several other published or anecdotal accounts of this phenomenon. In other

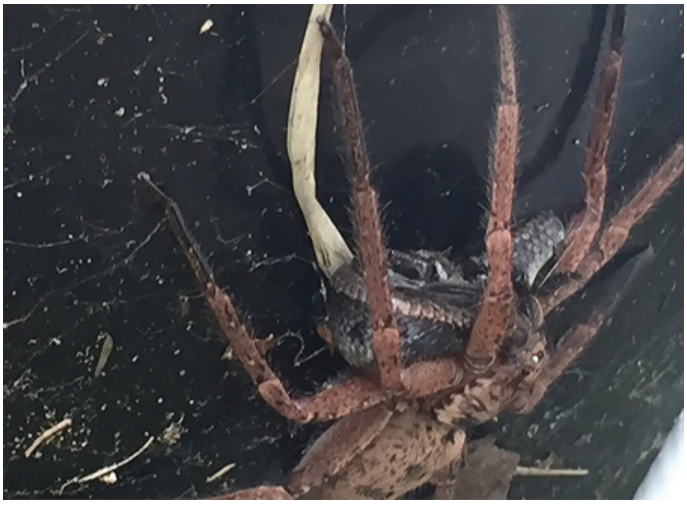

Figure 2. An adult Garden Skink *Lampropholis delicata* captured by a Huntsman Spider (Sparassidae; probably *Heteropoda longipes*) in a suburban backyard in Sydney. Photo R. Shine.

parts of the world, related spiders have also been reported to consume lizards, albeit only as occasional prey items (e.g. Kaston 1965; Vitt 2000; Hódar and Sánchez-Piñero 2002). Other large invertebrates (such as scorpions, centipedes, wasps, beetles and praying mantids) are also willing to take reptilian snacks (McCormick and Polis 1982; Jehle et al. 1996). Even in the well-manicured lawns and garden sheds of suburban Sydney, a small lizard is exposed to a diverse suite of predators, from domestic dogs and cats through to birds and other reptiles and, as reported here, to include occasionally invertebrates. It's a jungle out there.

Acknowledgements

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